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CLAIMS:

1.   Method of allowing variation of data in a buried data channel (30, 32, 34, 36) provided in a media signal (S), which comprises at least one set of audio samples of digital audio information, comprising the steps of:

providing a buried data channel (30, 32, 34, 36) having a certain spectral shape
5   in the audio samples of the media signal, (step 60),

inserting payload data (D) in the buried data channel, (step 64), and

inserting information corresponding to the spectral shape (42) of the buried data channel into the buried data channel, (step 62).

10   2.   Method according to claim 1, wherein the information corresponding to the spectral shape is digital.

3.   Method according to claim 1, wherein the information corresponding to the spectral shape of the buried data channel comprises information about the number of
15   coefficients to be used in a filter when updating the data of the buried data channel.

4.   Method according to claim 3, wherein the coefficients are represented as quantised log-area ratio (LAR) coefficients.

20   5.   Method according to claim 3, further including the steps of determining a masked error spectrum for the buried data channel, determining filter coefficients based on the masked error spectrum, determining number of bits to be inserted in at least one audio sample, and providing said coefficients to a filter for providing the spectral shape of the buried data channel.

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6.   Method according to claim 1, wherein the buried data channel comprises a header (30) and the step of inserting information corresponding to the spectral shape of the buried data channel comprises inserting the information in the header of the buried data channel.

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7.   Method according to claim 6, further including the step of inserting
synchronisation and allocation information (40) in the header of the buried data channel,
which information enables extraction of data in the buried data channel.

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8.   Method according to claim 1, further including the step of randomizing data to
be inserted in the buried data channel in the form of dither coded for allowing decoding in
order to retrieve the data.

10   9.   Method of varying data buried in a media signal (S) comprising at least one set
of audio samples of digital audio information, comprising the steps of:
             extracting information corresponding to the spectral shape (42) of a buried
data channel from said buried data channel (30, 32, 34, 36), which channel comprises
payload data (D) and is provided in at least some of the audio samples, (step 70),

15   updating the payload data, (step 74)
             inserting data including the updated payload data in at least some audio
samples, (step 79), and
             using said spectral shape information for modifying the spectral shape of the
data in the buried data channel having the updated payload data, (step 76).

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10.   Method according to claim 9, further comprising the step of extracting payload
data in the buried data channel, (step 72).

11.   Method according to claim 9, wherein the information corresponding to the
25   spectral shape of the buried data channel comprises information about a number of
coefficients to be used in a filter when changing the data of the buried data channel.

12.   Method according to claim 11, wherein the step of using said spectral shape
information for modifying the spectral shape of the data in the buried data channel comprises
30   using the spectral shape coefficients in a noise shaping filter used when inserting the data
including the updated payload data in the buried data channel.

13.   Method according to claim 11, wherein the coefficients are represented as
quantised log-area ratio (LAR) coefficients.

14.   Method according to claim 11, wherein the coefficients have been transformed into another domain.

5   15.   Method according to claim 9, further comprising the step of extracting synchronisation and allocation information from the buried data channel (step 70) and extracting data in the buried data channel based on this synchronisation and allocation information.

10   16.   Method according to claim 9, wherein the originally provided data in the buried data channel is provided as reversibly coded dither for allowing retrieval of data and the steps of extracting includes decoding the dither and further including the step of coding the data including the updated payload data with a dither function before the step of inserting the data in the audio samples.

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17.   Device (10) for inserting information allowing variation in the data of a buried data channel (30, 32, 34, 36) provided in a media signal (S), which comprises at least one set of digital audio samples, comprising:
            a digital media source input for receiving at least one set of digital audio
20   samples, and
            a data inserting unit (14) arranged to:
            provide a buried data channel (30, 32, 34, 36) having a certain spectral shape in the audio samples of the media signal,
            insert payload data (D) in the buried data channel, and
25   insert information corresponding to the spectral shape of the buried data channel (42) into the buried data channel.

18.   Device according to claim 17, wherein the data inserting unit is arranged to insert the information corresponding to the spectral shape of the buried data channel
30   information in a header (30) of the channel.

19.   Device according to claim 17, wherein the information corresponding to the spectral shape comprises information about a number of coefficients to be used in a filter when updating the data of the buried channel.

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20.   Device according to claim 19, wherein the coefficients are represented as quantised log-area ratio (LAR) coefficients.

5   21.   Device according to claim 17, wherein the data inserting unit is arranged to insert synchronisation and allocation information (40) enabling extraction of data in the buried data channel.

22.   Device according to claim 17, wherein the data inserting unit comprises a
10   randomising unit (81) for providing data to be inserted in the buried data channel in the form of dither coded with a reversible coding function.

23.   Device according to claim 17, wherein the data inserting unit further comprises a masked error spectrum generating unit (13) and a noise shaping unit (89) and is
15   further arranged to combine the spectrum of the dither variation with the desired masked error spectrum and then provide this information to the noise shaping unit for forming a noise shaped signal for combining with the audio samples.

24.   Device (15) for varying data buried in a media signal (S) comprising at least
20   one set of audio samples of digital audio information, comprising:
           a control unit (52) arranged to extract information corresponding to the spectral shape of a buried data channel (42) from said buried data channel (30, 32, 34, 36), which channel comprises payload data (D) and is provided in at least some of the audio samples,
25   a buried data processor (17) arranged to update the payload data, and
           a data inserting unit (19) arranged to insert data including the updated payload data in at least some of the audio samples using said spectral shape information for modifying the spectral shape of the data in the buried data channel having the updated payload data.   ·

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25.   Device according to claim 24, wherein the control unit is further arranged to extract payload data provided in the buried data channel.

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26.   Device according to claim 24, wherein the data inserting unit comprises a
noise shaping unit (89) providing said spectral shape of the buried data channel and the
control unit is arranged to extract information about a number of coefficients to be used in
said noise shaping unit when extracting the spectral shape information and to provide these
5   coefficients to the data inserting unit.

27.   Media signal (S) comprising at least one set of audio samples of digital audio
information, comprising:
           a buried data channel (30, 32, 34, 36) in at least one of the audio samples
10 comprising information corresponding to the spectral shape of the buried data channel (42).

28.   Recorded medium (90) comprising a media signal including at least one set of
audio samples of digital audio information, which signal comprises:
           a buried data channel (30, 32, 34, 36) in at least one of the audio samples
15 comprising information corresponding to the spectral shape of the buried data channel (42).